

Preliminary analysis of $^9\text{Be}(\alpha,n)^{12}\text{C}$ integrated and angular experimental differential data at below 4MeV

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This presentation intends to review a preliminary analysis of $^9\text{Be}(\alpha,n)^{12}\text{C}$ integrated and angular experimental differential data at below 4MeV energy performed at CEA Cadarache using the SAMMY code. Although not up to date, we plan to extend this action in a near future using the CONRAD CEA code. During this work, a consistent set of Reich-Moore resonance parameters, including possible new resonances and reproducing the various $^9\text{Be}(\alpha,n)$ experimental data available, has been evaluated up to 4 MeV. A set of pointwise integrated and angular differential cross section data has been produced and its impact is tested using the recently developed iSourceC code (Intrinsic neutron Source computing code by Cadarache) for a homogeneous Pu ^9Be neutron source. The iSourceC tool is designed to test next evaluated files generation of angular resonant cross sections charged alpha-particles against experimental data when there are available. Among possibilities is the treatment of incident photons neutron sources.

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